

TSMC-98-518



April 1, 1999

To: Commissioner of Patents and Trademarks
Washington, D.C. 20231

Fr: George O. Saile, Reg. No. 19,572
20 McIntosh Drive
Poughkeepsie, N.Y. 12603

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TECHNOLOGY CENTER 3700

Subject:

Serial No. 09/247,974 02/11/99

T.L. Ying, C.M. Wu, Y.H. Lee,
W.C. Chiang

A KEY-HOLE FREE PROCESS FOR HIGH
ASPECT RATIO GAP FILLING WITH
REENTRANT SPACER

Grp. Art Unit: 1765

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GROUP 1700

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation
In An Application.

The following Patents and/or Publications are submitted to
comply with the duty of disclosure under CFR 1.97-1.99 and
37 CFR 1.56. Copies of each document is included herewith.

U.S. Patent 5,814,564 to Yao et al., "Etch Back Method to
Planarize an Interlayer having a Critical HDP-CVD Deposition
Process", shows an etch back method to planarize an interlayer
having a critical HDP-CVD deposition process.

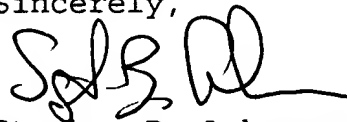
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TTC 1700 MAIL ROOM

U.S. Patent 5,756,396 to Lee et al., "Method of Making a Multi-Layer Wiring Structure having Conductive Sidewall Etch Stoppers and a Stacked Plug Interconnect", teaches full spacers on metal line sidewalls.

U.S. Patent 5,262,352 to Woo et al., "Method for Forming an Interconnection Structure for Conductive Layers", describes a method for forming spacers on metal line sidewalls.

U.S. Patent 5,462,893 to Matsuoka et al., "Method of Making a Semiconductor Device with Sidewall Etch Stopper and Wide Through-Hole having Multilayered Wiring Structure", shows a spacer used as an etch stop on a metal line.

Sincerely,

A handwritten signature in black ink, appearing to read 'SBA', with a long horizontal flourish extending to the right.

Stephen B. Ackerman,
Reg. No. 37661